

Ernest H. Quayle

Field Notes

September 24, 1930 - November 3, 1930

1
San Diego, Calif. U.S.A. Sept. 24, 1930.

Speedometer reading 04686 at Huey's House.

Arrived here 7:40 a.m. Left at 2:35 p.m. Stopped at
National Ave. 3:00-3:15 p.m.

Otay, Xaux Swift - Huey identification.

Tijuana 4:00 p.m. Short delay, must return tomorrow
04716 = 30 mi. camped for night

Back to Tijuana + at custom's house

9:30 - 11:25. Speedometer 4725

Enadalupe Canyon - Barn
Swallows.

La Salina, Vaux Swifts +
Barn Swallows.

Sept. 25, 1930.

4798 Ensenada 3:50 p.m. river -

Leave " 5:30 p.m.

Arrive Santo Tomas 8:30 p.m.

4831

We saw a coyote on the terrace just
before dropping into the river bottom
at southeast end of Ensenada Bay.

Several cottontail rabbits crossed the road.

Between the Live Oak camp ground
down in La Grulla Valley and Santo

Tomas Village we counted 30 Dipodomys.

Two this side of the village.

Sept. 26, 1930 - 04831

7:00 a.m.
A rattlesnake basking in road.

4848 - 2 quails

4852, 2 miles south of.

San Vicente - one Grinnell Shrike.

Saw Phoebe all along the coast.

4872, San Antonio del Mar. Grinnell Shrike.

Hamilton's, 1:20 left 3:30

Barn Swallow - San Quintin plain - 04921.

Saw a "poorwill" just before camping.

Stopped at ^{Maria} Santa Monica, 04940 - near San Quintin, 6:15 p.m.

Mileage 109.

San Quintin plain is a wide flat stretching 30 miles or more along the coast and four or five miles deep ending against a prominent bluff of light colored yellow and red tinged strata almost horizontal across the face of the bluff but apparently dipping off to the SE at a low angle.

This bluff is the seaward face of a level terrace fully 100 ft. higher than the plain. What appeared to be another higher terrace could be seen still farther back. Beyond the long narrow bay of San Quentin stand three prominent volcanic looking hills. The whole region from ("Camel-too" phonetic) where we first struck the ocean is apparently a series of sea terraces. We came thru on high and only stopped at Hamilton's, so there was no chance to look for fossils. Shells were often seen along the road in the surface layer. It seems too numerous for Indian mounds, but might have been. The shelly layers were often between streaks of conglomeratic material.

Sept. 27, 1930

2 Say Phoebe's & one yellow warbler taken at camp. A Cooper hawk wounded.

Left camp 7:15 am. 04940 - 215.3 from Tijuana.

04948. - 8 m. S. of San Simon. ^{to Maria} Woodpecker, Towhee, Desert Sparrow, Bewick Wren.

04952 - Socorro - Large billed marsh sparrow, Savannah Sparrow. Saw lots of large bills.

Half a dozen Semi-palmated plovers.
observed. One black-breasted plover
taken.

2 mi. North of Rosario; at head of
grade from mesa, just down in draw.
1 cactus wren + 1 ^{taken} linnet. 3 other wrens
observed but not obtained down the draw.

04975. El Rosario. Stopped half an
hour - 12:00-12:30 - for gas + to write letters.

04977 - Say Phoebe, Bush Tit,
Gambel Sparrow.

8 mi East of El Rosario. Shot cactus
wren, gnat catcher, + 5 quail.

Camped at San Fernando. 7:30 p.m.

05020 = 80 mi. run for day. There was
a terribly rocky steep grade up over some
volcanic hills. On the downhill side Huey
wounded a coyote at about 250 yds. Traps
were set for mice + rats near the sign post
above the old mission, at the forks of the
road. A kit-fox went between the trap
setters and camp.

Cloudy + overcast all day.

Sept. 28, 1930. A heavy, wet cold fog hung over us this morning. Got started at the skinning when a flicker "flicked", so Huey told me to go get him. I went and staid out 5 hours but did not get a flicker. Saw several and tried some long shots. Brot back a thrasher, a cactus wren, a desert sparrow and a towhee, all shot on way in. The thrasher + sparrow up on the cactus covered rocky hillside. The cactus wren at the edge of the stream bed. The towhee in the willows and mesquite. ^{Saw White wing doves this morning.}
Left 4:15 p.m.

Saw Barn Swallows.

Arrived San Augustine just about sundown. Filled the water cans and shot some morning doves for supper. Potted about $\frac{3}{4}$ of a mile along the road to the Beach and camped for the night on a flat just south of a long low level knoll, where the desert pavement consists almost entirely of a flinty chert. Sam + Huey set out their rat traps. Went around them after supper but found hardly anything in them except one *Dipodomus*.

The surrounding plain is rather barren with a greasewood and a few small brush plants. Off to the westward brown hills have a sparse growth of Cirio trees and in favored canyons a few giant cacti grow.

Between camp and the mesquite lined wash is a level creosote plain in which we have not yet observed a resident bird.

Sept. 29, 1930 There being so few mice + rats in the traps, Huey remained in camp to skin them while Sam + I went over to the well to find a lost part of my auxiliary barrel and hunt birds.

A cold fog + cold wind covered the plain this morning but cleared off between 8:00 + 9:00 and warmed up. A flock of buzzard were circling just above the well. Lark sparrows + linnets were observed at the well sparsely, but two small flocks of the former flew along the draw during the morning. Saw two barn swallows. ^{Two kinds of} ~~Two kinds of~~ ^{+ the desert sparrow} ~~gnat catchers~~ Western + Black Tail _^ were the commonest birds but even they could not be called abundant. One lone Talmic warbler was taken, also a lone Grinnell Shrike + a Western Wood Pewee. A very poor day's hunting. Returned to camp through the unpopulated creosote plain + skinned birds until bed time. A very poor locality for birds here.

The night was cold + windy. Fog passed over us early in the night. There is considerable dewfall in the morning.

Sept. 30, 1930 Less rats & mice in the traps than yesterday, so again Sam & I went hunting. This time headed westward for the Cirio & cactus hills. Chased 3 flickers for an hour or more. Found both gnat-catchers and the desert sparrow in the bushiest places along the ravines. A few rock wrens, and one shrike, a pesing Brewer blackbird, a Cooper's & a Sparrow Hawk and a few Brewer Sparrows made up the avifauna of the Cirio plant association.

Went northward to the draw and there picked up some migrants: orange crowned warbler (*Vermivora celata*); barn swallow, brewer sparrows; ash-throated fly catcher, gnat-catchers and desert sparrows. Then we got into a flock of quail and took seven.

Oct. 1, 1930 Still less mice & rats in the trap owing no doubt to the bitterly cold night. Sam & I out hunting again this morning, this time heading southward from camp. Mock wren's taken as we passed over the ledges of Rhiot. Now in the draw beyond amongst the mesquite trees. Found both gnat-catchers in the draw.

As the edge of the cirio was reached a flicker flushed from an ant hill—missed a wing shot. Saw & heard cactus wrens in the cactus (*chola?*) and a thrasher led me a long chase & then escaped.

Farther up the draw-between the hills there was a small flock of desert sparrows. It is getting rather hot in the sunshine—10:30.

Seeing some strange trees on the hill farther south I came on over + found them to be what is probably called the Elephant Tree because of the heavy massive trunk and main branches from which only ^{short} thick twigs grow. There are no leaves on them now. The seeds grow in small clusters at the ends of the youngest twigs.

In the draw below I stocked a thrasher successfully. Everything is still with a desert quietness.

This ridge appears to be composed of red Andesite with dikes of greenstone and ashy beds. It stands up ruggedly amidst the flat buttes that generally surround the plain.

Down in the draw to the eastward there were signs of gopher diggings. Down the draw there were more gnat-catchers and brewer sparrows. Where this wash came into a larger one at the foot of the hill a large flock of quail were flushed. By careful stalking enough were obtained to fill the pot for our third quail dinner. (9+7+5). A small owl was flushed from a mesquite tree probably a screech owl.

Two Anna humming birds alighted in a nearby tree while I was stalking quail, and fell with one dust shot. A wood peewee made up the day's catch.

Late for lunch, and late at the skinning table, but by sitting up until eleven, we held our daily skin average at thirty.

Huey set up his flashlight camera and baited it well with bird and rat entrails. Bang! She went at 8:00 o'clock. He went out and reset it, and just as he sat down to skin a bird, bang! she went again. After finishing the bird he went out again and reset the trap. At 10:30 came the third flash, I had heard something just outside the tent. We were skinning out the last birds when I distinctly heard something again near the tent. We took the gas-lantern and stepped outside to see a many airdalesh dog there between the tent and truck. Huey crossed it, and the dog ran down the road towards the windmill and sat down about 50 yards away. I got a shotgun and Huey peppered him with No. 8 shot from the aux, Yip! Then a No. 6 in the 12 gauge heavy lead, Ki-yi! and dust. But he was back during the night around the camp and cleaned up a bunch of bird bodies with two teaspoonful of arsenic and alum sprinkled on them. Don't blame Huey for being mad. Those three pictures of a many dog cost about \$5.10.

Clear & windy

Oct. 2d. 1930, Yesterday Sam's Thrasher proved new for this locality and so we are out this morning trying for others observed yesterday in this same draw. Two were seen but not obtained. Succeeded in getting a cactus wren and a cactus woodpecker and a grinnell shrike. Also took a desert sparrow and one goat-catcher. Went over to the wash, but failed to locate any quail. The humming birds were abundant today. Got an Audubon Warbler. We went in to camp just after noon.

While skinning birds we heard the whistling call note of the Le Conte Thrasher. I went after the bird. Found them much to my surprise in the creosote flat which had always been so barren of bird life. Had to shoot them at the extreme range of the heavy load in the 12.

They alight in a bush, look around and drop to the ground and run like a roadrunner, very rapidly and evenly. Not a hop. Brought in three very much to the surprise of everyone. Huey made up the skins. We are not putting double names on the birds. Only the skinner's name being on the label. Thus far we have kept Huey busy. Tonight we had 192 skins made up. Only 32 of which were mine, & 47 Sam's.

Clear + windy.

Oct. 30 1930. Came over east of the arroyo to hunt this morning. Bewick wrens and a woodpecker being our only catch. We are passing up the gnat-catchers now except to fill out our number as we go to camp. There are rarens about, not abundant but fairly plentiful + Turkey buzzards too. Brewer sparrows we pass by with a curse when we recognize them after wasting time to stalk them. Sam shot three; and we discovered at camp that one was a Clay-colored(?) sparrow and the other a Chipping sparrow. Evidence that the proper way to collect is to kill at least one bird of every passing flock.

Meeting at an Andesitic hill near the wash I spoiled Sam's hard earned shot at a flicker. On a ledge of chert while hunting a rock wren a Phainopepla(?) flew into a near by tree.

Along the draw eastward sparrows were abundant. Desert sparrows were taken and the three above mentioned.

Over the hill we came upon a couple of large burrows, and a little beyond flushed a burrowing owl but failed to get it. Along the road back to the windmill there were several flocks of horned-larks. Three were taken, and at the waterhole

a pot-shot of 40-dust killed twelve.
Two cow-birds, a brewer blackbird and
an immature Gambel sparrow were
taken. Also six quail for supper.

Oct. 4, 1930, 05-038.

Left camp at 10:00, headed for the
Onyx. Sam & Huey skinned birds & rats this
morning while I concentrated the packing
cases. Three Vaux swifts flew over camp
headed southward, about 7:00 & 8:00 a.m.

05049 - The Onyx.

05058 - Junction 2 mi.
from San Agustín.

05071 - Camped for the night
amongst the granite boulders, cirio trees
and giant cacti. A promising looking
locality. I hope the trap lines prove
productive in the morning so we can
go bird hunting in the forenoon.

While setting his traps, Huey ran across
a small rattlesnake - the first we have
seen on the trip - crawling around in
a bush, off the ground. We were sur-
prised not to find more this morning
but only one track was observed.
A fellow American named Baldwin with

mining interests at Punta Prieta told Huey that he has killed a number of large red rattlesnakes between El Rosario and Hamilton's during the summer. He travels this road a lot and says he has never killed one from Punta Prieta to El Marmol.

Oct. 5, 1930 Last night was our first comfortably warm night of the trip. Sam and I out hunting this morning. Flickers were more abundant here than anywhere else that we have hunted, but just as wild and wary. One alone was caught. Cactus woodpeckers were present but not very plentiful. Cactus wrens fairly abundant. Also rock wrens and Bewick wrens. The Mearns Thrashers were rather scarce and extremely wary. Desert sparrows abundant. Also the black tailed and western gnatcatcher. A few rarens and one dwarf horned owl were seen.

Three jackrabbits and as many cottontails were seen and one mangy jack taken, but not skinned. Also saw an Antelope ground squirrel, but he dropped into a crevice in a huge granite boulder. Back to camp at 10:30 and pulled on to Cataviña.

Pulled camp before noon and moved down to the arroyo at Cataviña, which cuts the granite mesa heading at a lava capped granitic peak. There is a graceful species of palm growing sparsely along the floor of the arroyo.

05081 is the reading of the speedometer.

Oct. 6, 1930. The nights on this granite mesa have been the only comfortable nights we have had. Heard a couple of Poor wills and an owl last night.

Hunting birds was good this morning. I had 8 Hila Woodpeckers, 2 Cactus wrens, 1 Towhee, and four warblers and a gold finch in less than 2 hours of shooting.

Flickers were heard and seen flying away as wild as ever. One Zone-tailed hawk flew over camp towards evening.

The owl was heard again tonight but no poorwills.

Huey and Sam went down to a shored out waterhole and collected a jar of toads and frogs. None of the few lizards seen have been collected. When killed they drop into the crevices of the granite boulders.

Oct. 7, 1930. One day's hunting has made the birds—except the migrants—as wild and wary as elsewhere on the desert. A few warblers were picked up near the water hole. A tramp up over the granite plateau as far as the rocky hills to the northward yielded only a rockwren, a goldfinch (near the arroyo) a bewick wren, Only one flicker was seen, and one group of cactus wrens. A towhee was obtained near the hills. All the time in cordones—one group the thickest grove I have yet seen. Two ravens were killed but the plumage is not good yet. We had 8 quail for supper this evening. I took one of a flock of Western Tanager and another Oct. 8, 1930 towhee from the waterhole. Huey late this evening shot a hawk at an extremely long range, and could not find it in the dusk. After supper we went down with the flash lights and lantern and fortunately picked it up. A splendid Red-tail.

Brought in the first ground squirrel today. They are not very numerous, probably pretty well holed up.

Oct. 8, 1930

This morning I ascended an arroyo leading off from the main canyon to the south^{east}ward. Birds—except rock wrens were very scarce. Shot a Say Phoebe & Bewick wren along the arroyo. Saw nothing else until returning to the palm groves well up the main canyon. There shot another red-shafted woodpecker, and an ash-throated flycatcher. Saw a sparrow hawk but let it live. A few cactus wrens and fewer Gila Woodpeckers were observed. A few migrants were present near the water hole. Also flushed a flock of quail where I entered the canyon. There was a cold fog blew over this morning, but did not last very long. In the evening, however, the sky was overcast and a cool breeze came from the west.

Oct. 9, 1930. Cloudy and uncomfortably cool all day, with slight falls of mist. In the evening very chilly with light squalls of rain.

Sam and I both hunted up canyon today and set traps for ground squirrels as we went. Birds were very scarce all

day. Several small flocks of goldfinches flew across the canyon southward today. In order to get any number of birds we had to shoot gnat-catchers. One Mearns Trasher was seen. A bewick wren, a house wren, one Gila woodpecker, one vermivora warbler, a ruby crowned kinglet, a sparrow hawk and a cooper hawk besides the gnat catchers made our double catch for the day. The traps yielded two ground squirrels and Sam shot a third.

At lunch time today a man named Walters stopped and had lunch with us, and talked about turquoise mines. He had some worth-while information about roads and deer.

Oct. 11, 1936. Cold night and a cool day. Glorious cumuli clouds floated across the sky all day. Lightening far off to the eastward in the evening. Huey did some photographing, and caught a few more gophers making twelve in all. I reset the squirrel traps and got nothing but one lost trap. A perognathus mouse was caught in one trap this morning. Three others were sprung. Got three quail for our evening meal making 8-9-3-3 from this locality. Obtained a male sparrow hawk - they ^{are} living on the small migrant birds.

a couple of Gila Woodpeckers. Two Audubon warblers, a fly-catcher and a Vermivora warbler, and a mockingbird made up the days catch. The afternoon skinning save for half an hour's visiting with the Baldwins who took letters north for us.

Oct. 11, 1930. The morning spent cleaning up + packing birds. Ready to move at noon. Left at 1:15 after bathing in the frog puddle.

05081-

05083- The granite outcrop ended abruptly and all is volcanic now, and mostly desert pavement. The cardones ended with the granite, ocoteas increased and elephant trees seem more abundant and larger.

05084- Stopped to force gas from the reserve tank to the front one. Stopped with the car pointed down hill to help the pressure pump.

Three cars, mostly American-regared Mexicans, went southward this morning so we should be fortunate not to pick up any cactus thorns. The last outcrop of granite occurs just 22 miles south of Cataviña (53 miles north of Punta Prieta), where a long ridge of huge

boulders stands above the Llano. The surrounding hills are volcanic. The plain is desert-pavement and gravelly alluvium. Several prominent buttes stand above the plain, some are cone shaped, others truncated cones, and a few look very much like volcanic necks. The lava fields are, for the most part devoid of the vegetation so characteristic of the granite area we passed thru on either side of Catarina. Paraguay Canyon seems to be a line of abrupt separation of the two regions.

05103— Out in the plain we camped for the night about one half-mile south of the prominent granite hill. Here the ~~rat~~ traps are set to see if this change of association produces anything interesting.

This morning while out picking up the squirrel traps I shot another mocking-bird. A Shrike was taken a ^{half-}mile back along the road.

Very few birds have been seen in the low brush, frutera (stunted) scattering creosote.

The hills are covered with desert pavement the plain with a coarse gravelly alluvium.

Mesquite trees scattered along the small dry wash furnished our first dutch-oven meal—a quail potpie.

Deer tracks were observed along a trail between here and the wash. A hot mesquite fire is very comfortable as we write our notes, while waiting for a visit to the traps, just before the moon rises. The atmosphere is clear and dry here. Stars of the lesser magnitudes can be seen to within 2° or 3° of the horizon, while the planets and 1st magnitude stars shine brightly on the horizon rim.

If the trap line produces the proper results here we will probably remain as long as our water holds out.

The interior geology of this peninsula is very much igneous. Very little else, except alluvium has been observed this side of ~~El~~ El Marmol.

The granite appears to have been well exposed by erosion when the vulcanism occurred. Ash beds and lava flows being unconformable upon the granite. Much of the latter has been eroded away to an extent much greater than the erosion that has taken place in the Columbia Plateau lava fields. There are no buttes here that bear the young volcano appearance of our buttes in the Upper Snake River Valley.

The volcanic necks observed express a greater time of erosion. The deposits of conglomerates are consolidated and in places cemented by a caliche matrix of considerable age.

8:30: Oct. 12, 1931 Left camp.
 OS/11. 9:30 a.m. Huey shot a ~~spitter~~
 male half grown deer from the car and took
 a couple of shots at the doe. We gutted the
 deer and loaded it in the car, pulled 3 miles
 farther along the road and camped near a
 small knob of granite. Skinned the deer &
 hung it in the shade of a mesquite, then
 while Huey & Sam skinned out the feet, ears &
 nose I cooked some liver & onions for lunch.

After lunch I went hunting behind camp.
 Saw a mockingbird but did not get it. Saw
 a large flock of quail, and any number of
Gambel + Brewer sparrows, a few Desert sparrows
 in the flock. The brush here is thick and high
 and when covered with a vine that grows near
 the arroyos it affords good shelter for birds and
 deer. Deer have shaded up behind nearly every
 shrub and under every mesquite tree. Morning
doves were fairly numerous along the wash.
 Barn swallows were flying over the flat. Another
 mocking bird and a Le Conte thrasher were taken

near the wash—the first LeConte was obtained farther up the wash.—The shots aroused a young doe. A number "2" shell dropped her. After gutting her I carried her to camp, & spent the remainder of the afternoon dressing her, and the evening skinning out the ears, feet & head.

Oct. 13, 1930. Hunted up the main wash again but the kill was very poor. Sparrows were more numerous than ever one flock being exceedingly large. Saw nor heard nothing of LeConte thrashers this morning. Took one Goldfinch out of a flock where the road crosses the wash. A couple of Cactus woodpeckers were taken from the mesquite trees. A cowbird was killed at camp this morning and another observed up the draw. A visit over to the giant cactus grove ^{NE} northeast of the road & draw yielded nothing. Only one cactus wren and one Brewer sparrow were observed there. Two sparrow hawks were seen beyond range in the Ocotillas along the ridge back to camp. A Vaux swift flew over camp this morning just before breakfast.

The hills to the northeastward are composed of fine grained igneous rocks with considerable metamorphics. The desert pavement on the plain below is derived

From this source, Giant cactus, *Lophocereus schottii*; *Ocotilla*, and some chala cactus, ^{agaves} with a very few cirio trees make up the groves in the ravines below the hills. Over the ridges there is very little but *ocotilla* and agaves. The plain below is covered with creosote and frutia and a white brush. Along the arroyos are mesquites and shrubs densely clothed with a vine.

Just after supper tonight and again at 8:30 the coyotes were howling in every direction. And about 8:45 we heard two fighting very close to camp, probably over the rat scraps Huey threw out this evening. There were ten traps missing this morning and others contained only wet bloody mouse fur. Kenison went begging at supper tonight. These cold nights are going to make it possible to keep meat for several days. We walked through flocks of quail again today.

In the meadow(?) west of camp were several meadow larks, I traded Sam a gnatcatcher for a lark—they make up easier.

When we went around the traps several were missing and coyote tracks told the whole story. It will be necessary to trap the coyotes in order to protect the rat trap line. This place is alive with coyotes.

Cold, uncomfortably cold, again tonight. A sheepskin coat is ~~now~~ ^{too} warm.

Oct. 14, 1930. A male + a female cowbird and a rock wren were shot from camp before breakfast was over. The coyotes got more than twenty traps last night. Everyone out bird hunting this morning. Huey up the arroyo, Sam down it, while I followed a couple of LeConte Thrashers through the creosote west of camp. Shot four quail for coyote bait. Two Gray Phoebe, a lark bunting, three vesper sparrows, a sparrow hawk and a warbling vireo (spoiled in skinning) made up my catch. All taken in two hours and a half, less than $\frac{1}{4}$ mile from camp.

Rather hot today. Not so cold tonight. A visit to the traps just after supper produced six mice and one coyote. We are going out again now. 10:00 o'clock. Another coyote and a few more mice. The two coyotes look like this year pups.

Oct. 15, 1930. There were two more coyotes in the traps this morning—one set getting three during the night—the old bitch and ⁴two pups. The other was an old dog. Having trapped these four coyotes and also moving the rat traps over in the thick brush netted two dozen mice on one string of traps.

I spent the day skinning out the coyotes. But got one bird done this evening. We heard screech owls calling in the mesquite trees west of camp.

Oct. 16, 1930.

Skinned another coyote and cleaned skulls.
Also skinned 2 birds + packed a box of specimens.
Killed a sharp shinned hawk in camp.

Oct. 17, 1930 = 05114

Leaving camp at 8:40 a.m. The sharp pointed peak across the mud flat bears $S 42^{\circ} E$ from camp. As we moved along the road we discovered that the Chapala mine (now deserted) was nearly due east of camp. We wrote 2 m. N. W. of Chapala on the labels.

The mile or two of road across the mud flats is about the best stretch we have struck this side of Ensenada. It would be wholly impassable in rainy weather.

05123 At the summit of the ridge beyond the mud flat we have stopped for pictures. Huey is out with his 5x7 and Sam with his Brownie. This is one of the most impressive *Cactus Gardens* in Lower California. Giant, barrel and ^{Schott's} cholla; cirios and ocatillas, elephant trees, mesquites (small) palo verdes, agave, sajote, dodder on elephant trees, broken rough granite, The Calmalle ^{SP} mountain range in the distance.

05124 More pictures. Birds typical of these cactus groves are beginning to show up. Cactus wrens, woodpeckers, rock wrens and gnatcatchers were observed during the last mile.

There were gopher burrows near our camp at Chapala but no attempt was made to trap them. We seem to have succeeded in catching the coyotes that raised such havoc with our rat traps. Even the baited flash-camera set went untouched last night.

From the structure of the rocks and the indication of the vegetation a well could be dug without unusual trouble just above the granite knob where we camped beside the road. The mesquites are thickest and largest there and it looks as if the granite forms an underground dam across the drainage system there. The Chapala well-somewhere near the mine is said to be some 300 ft. deep. From Saragway to Punta Prieta is the driest stretch we have had. Our water cans, filled at San Agustin, have rusted badly inside. The water is poor drinking. We have been 12 days and have one 5-gal. can untouched, half of another left. One of four cases of gas was emptied into the tanks, filling them.

05-133 — The best Yucca Grove and more pictures. Deer tracks numerous. The llano here is formed by slightly hillocky beds of what may be geyserite or

some similar deposit. Samples were collected.

This deposit is widespread over the Llano de Santa Ana where the road passes down it above Punta Prieta. But the last few miles the road follows along ridges of conglomerate. Cactus covers the plain abundantly, the heaviest growths we have yet observed.

Punta Prieta is a handful of deserted adobe houses, a delapidated quartz mill and ore dump, and a couple of wells. Only two or three of the houses are inhabited by as many squalid families—mostly children—the men of which make a precarious existence by hunting and occasionally working on prospects. There are two wells about 70 ft. deep where alkaline water is obtainable.

Along the road below Punta Prieta are terraces of interbedded sandstones and conglomerates, unfossiliferous as far as observable from near the road. These extend in every direction as far as San Andres.

Beyond that mud-hole and date palm the road enters a rocky canyon and crosses the barrier of metamorphic hills which at one time held an inland lake in which the stratified beds were deposited. In the bottom of the canyon are large pools of water so alkaline that a white coating surrounds them.

In the cactus above San Andres we saw our first Xantus California Jays. This looks like a promising field for collecting.

We followed the road out to its end at an old rock house and rock walled corral where we are camped for the night, on Santa Rosalia Bay, 67 miles from our Chapala Camp.

(05181) 456 miles from Tiajuana by the Speedometer—farthest point south of the trip.

Huey shot three quail just this side of ^{the} Punta Prieta Rock. Here on the coast birds are scarce. We are going to hunt for Le Conte Thrashers in the Sandhills out on the point tomorrow. And if the tide gets low I will look for corals and shells. But our interests are mainly birds and mammals.

In the canyon we saw a wild cat but failed to get a shot at it. We may set a trap there tomorrow on our way back to San Andres. There are shells along the road from below the canyon to the beach. either almost continuous Indian Mounds or else Pleistocene. We may have time to look into the ledges nearest the road on our return. Saw a duck hawk chasing sea shore birds this evening. Cold breeze with a fog hanging off the point.

Oct. 18, 1930. Everybody off for the sand dunes behind Punta Rosalia this morning to hunt Le Conte thrashers. Up on the terrace a horned lark was obtained. Say phoebes were not uncommon in the sand dune region—5 were obtained there. Huey got one gray sage sparrow and Sam 2. Out on the point I shot a rock wren, and on the terrace above 2 large billed sparrows. Along the coast northward of the point beds of consolidated fossils were found at about the level of the surrounding terraces.—pleistocene(?).

Just when the tide was getting low a mountain lion track was picked up. It measured 90 mm. across. It was fresher than any coyote tracks that it crossed so I followed it along the rocks and out across the sand dunes until I met Huey. His tracks had crossed over the lion's so we gave up the chase. While both of us were trailing the cat we saw where it had stopped and cat-like had buried its sign. Huey ~~shot~~ a couple of Le Conte thrashers with one shot just before we quit the lion trail.

Coyote tracks were numerous along the coast.

In a thicket of Yuccas, cactus and thorny shrubs a Plicker was flushed; 2 Thrashers seen, and two Bewick wrens taken. Over the terrace on the way to camp, a coyote was met. Number 2 shot scattered around him and made him leave in a hurry.

An Osprey was flushed from the coast rocks. Two duck-hawks have been frequently observed. cruising along the shore.

The bed amongst the dunes is thickly littered with shells - too thickly and regularly distributed to be kitchen middens (pleistocene?)

In the sandy flat near the outlet from the sand dunes are beds of sanddollars. A few were collected.

On the flat terrace the pavement is a heterogenous mixture of rocks of various sorts. This corral at camp is built with huge rounded boulders obtained from the face of the terrace porphyries, granites and lavas, for the most part. The sand dunes are composed of an extremely fine wind drift light colored buff sand with many black grains.

Oct. 19, 1930. Sam and I up the canyon just north of the old rock house. A thrasher was flushed and finally obtained in the mouth of the canyon. A couple of hundred yards farther a hermit thrush was taken from the thicket—mostly elephant trees and fruitea—on the side of the ravine. Half a mile or so up beds (Loc. 391) of very fossiliferous sandy limestone full of fragments of pectens and casts of pelecypods were observed. A few good pectens were obtained.

Over the ridge and down the draw leading towards the sanddunes yielded nothing in the line of birds. Across the dunes three gray sege sparrows were obtained. Two thrashers were flushed from a shrubby knoll at the upper edge of the long shaping beach. Sam got them. The tide was not out very low and the rocks yielded nothing of particular interest. Returning to camp through the dunes two rostratus sparrows and one thrasher were obtained.

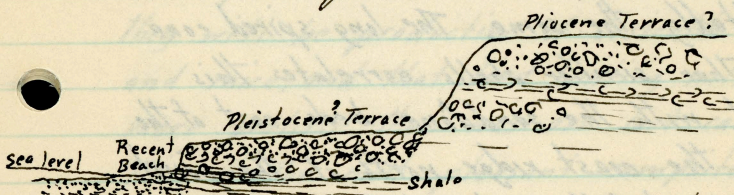
We came upon Huey down on his hands and knees picking up fossil shells out in the midst of the dunes. (Loc. 392). East of a prominent gap in the coast ridge, about $\frac{1}{4}$ mile, on a low flat knoll a hundred yards SE of several large lara boulders.

- Oct. 20, 1930.

Yesterday as we reached camp, tired & hungry, a boat pulled in from the "GRIME" at anchor in the bay for Sunday afternoon. Two men came ashore, Dr. Sommerfeldt & Mr. States. The former was very entertaining as a talker of travel and experience. They went hunting up the canyon. and While they were gone we wrote letters. Thus the afternoon was lost to science. We skinned until 10 o'clock and then turned in, finishing our birds and the few pocket mice caught this morning. Huey & Sam found an interesting fossil bed on the low terrace just above the beach. I went over to locate it definitely and collected a few more fossils and sand. In measuring the place from the upper edge of the beach I flushed a thrasher. Two others were seen in the cactus and Yucca's but only the one was taken. The heavy NW wind probably accounts for their presence here where we saw not a trace of them during our two days of hunting. Also the micetraps were set out there last night and the birds were not there when the traps were collected this morning.

We had a late lunch and then pulled camp to San Andreas, where we have pitched it beneath a mesquite tree $\frac{1}{4}$ mi. NE of the Date Palm.

Just before leaving Santa Rosalia Bay I found the Pleistocene fossil bed exposed for a hundred feet or more along the face of the small seacliff just above the ^{beach} sands, and on the opposite side of the wash from the old stone house. Half an oil can full of fossils were collected. Here was found another splendid specimen of the high spired cone similar to one found yesterday in the sanddune flat east of the gap in the shore line. The fossils here are in a calcareous sandy matrix in the spaces between huge boulders. (Loc.



Section of Terraces at old Stone House, Santa Rosalia Bay

Time would not permit more than a casual reconnaissance of the region but the section above illustrates the conditions as nearly as they could be determined. The pecten beds found $\frac{1}{4}$ to $\frac{1}{2}$ mile up the ravine and the conglomerate beds above them are truncated at the face of the seventy foot terrace which appears to have been the Pleistocene shore line. The Pleistocene beds are similarly truncated at the low cliff of the present storm beach line. The fossils in this terrace in many instances resemble the Indian Mound

shells on the surface, but they are compactly embedded in a matrix that is not easily broken from them. The abundant presence of *Olivellas* and *Cones* disprove any suspicion of mound deposition, as well as does the solid compactness of the conglomerate. The mound material in the soil of the terrace is quite distinctly separated from the fossil beds below by a layer of conglomerate. The beds exposed in the low sea cliff and the small washes that cross the terrace farther westward are undoubtedly the same. The long spired cone and other similar shells correlates this deposit with the sandstone beds east of the gap in the coast ridge north of the point.

The road follows along the coast on the lower terrace some two miles before turning inland toward Punta Prieta. There are innumerable shell beds observable from the car as far as the gorge through the metamorphic hills seven miles inland. There are, no doubt, numerous Indian Mounds along the route but it is hardly conceivable that they could account for all the shell deposits observed. The road passes near some conglomerate and sandstone bluffs in which there is no trace of fossils.

The small well rounded boulders in these have a riverbed facies. They are well consolidated and break off in huge blocks. Off to the southeast are high cliffs that have a similar appearance from the distant view along the road.

Above the gorge through the metamorphic hills is the marshy alkaline flat of San Andreas. On the edge of which we are camped. Burrows are abundant here. The traps are set southeastward and we hope they will be productive of desirable rats and mice, and that bird hunting will be more prolific than was our last camp. This is the most pleasant campsite of our whole trip.

Oct. 21, 1930. The trap catch was disappointingly poor. Everybody out bird hunting. Across the alkaline flat to the northwest. A say phoebe, a berwick wren and two gnatcatchers in the thickets bordering the flat. A cactus woodpecker in a mesquite tree. A gambel sparrow from the fruit of an Agria pitahaya. And a humming bird from nearby the same shrub. Then four quail as I left the mesquites for the cactus covered hillside. Gila woodpeckers and a flicker kept beyond range. Finally got one

bird out of a flock of five cactus wrens. Also one white wing dove from a flock of half a dozen scattered through the cirio & claphant trees. Another bewick wren from the dhickets in the bottom of the draw. The shot scared two does from cover. They stood looking at me for sometime, and only ran away when I finally moved. Too far for a shotgun to reach them.

Along the edge of the alkaline flat on the mountain side A black phoebe was seen, but not taken. A red-tail hawk circled along the upper cliffs. In the cactus from the head of the gorge to the water hole beside the road. Two gila woodpeckers and three cactus wrens were flushed. In the mesquite thicket on the south of the road at the bottom of the hill a cactus wren and a Vermivora were collected. Back to camp at noon.

Twenty-six birds were skinned and seven left over for Hrey to skin out in the morning. The traps proved a rank failure once more. One more night and then if nothing worth while shows up in the rat and mouse line we will move towards home. The turning point in a journey always has a certain fascination.

Oct. 22, 1924. A light shower just after daylight and a heavier one—but still light just after breakfast—interferes with our routine. The last of the Venison went into the Dutch oven this morning from necessity. Ten days is as long as one can expect to keep fresh meat in this country. We anticipated a catch in the steel traps this morning until two barefooted Mexicans came tramping along the road. If they camped at the waterhole we will have no luck in the traps.—They camped under a mesquite within fifty feet of one set and about three times as far from the other.

From the waterhole I carried shotgun and rifle up the draw to the southeastward and encircled the arroyos that form the drainage system above the well. Nothing but a rock wren was seen until starting to descend the ridge towards camp—half a mile east of the date palm. A berwick wren was taken there, and at the foot of the slope one cactus wren was shot. This camp was too nicely shaded and too near an abundant supply of wood to be successful. The alkaline soil probably has a deterrent

effect on small animal life. A drink at camp and the rifle abandoned then out to the north eastward to hunt two hours for for sage sparrows. A flock of sparrows was found on the edge of the brush flat near the cirio grove, Brewer sparrows. An ash throated fly-catcher, and a gnat catcher were taken from the mesquite trees scattered through the brush-flat. A cactus wren was taken on the way to camp, a ver poor day, with lots of tramping and few birds.

The hills southward present an interesting puzzle geologically. The only solution I can make of them and most of the strata surrounding Punta Prieta is that they were continental deposits laid down before the gorge below here was deepened to its present level. This would account for the alkali in them and the paucity of fossils. The conglomerates are well rounded and have a river bed facies. They are rather extensive, however.

Oct. 23, 1930. Everybody hunting again this morning. In the marsh near the waterhole marsh wrens were seen but could not be shot, because too close. A coot was in the waterhole. A brewer sparrow in the brush near the edge of the marsh. A phoebe and a shrike on lone tall shrubs in the flat above the marsh. The flock of quail were flushed from under the same tree as on the 21st. Only one shot. A hawk (probably sharp-shinned) and a means thrasher distracting me and leading a fruitless chase up a draw into the cactus hills. Returning a "chipmunk" was killed, and one Phanopepla. Through the mesquites back to camp, a shrike, ~~say~~ phoebe and house wren. We took time this noon to drive back to the waterhole beside the road and bathe. The hottest, driest day of the entire trip.

Oct. 24, 1930. Packing up this morning to move on our second jump towards home.

05193 Gila and cactus woodpeckers flew away from the road where the cacti are so thick four to seven miles from camp. Three to five miles from Punta Prieta. 05203 P. Prieta.

Left camp at 10:30 am.

05228. Camped.-sundown. 3 mi. North of Punta Prieta we flushed three jays. The three of us went after them—Huey out on the left wing, Sam up the road, while I circled out to the right to close in beyond them at the base of a black hill. Had to run for it, but beat the jays to the hill and by climbing a little got two of them. At Punta Prieta I got a red-shafted flicker that Huey says has a unique appearance. It came toward the well, then flew off to a mesquite and was eating ants when killed. There are plenty of ants here for them. A Cactus Woodpecker was killed from the car below Punta Prieta.

While Sam was kodaking the huge giant cactus Huey and I each got a clay colored sparrow, from the rocky, brushy hillside beside the road, 3 miles this side of Punta Prieta. On the rocky hillside near which we camped six quail were taken. Birds promise well here, and the rat traps were full when Huey & I went around them at ten-thirty to eleven-thirty. Here we will make up for the poor collecting at our last two camps.

Oct. 25, 1930. Out hunting this morning in the cactus east of the road. Clay colored sparrows, desert sparrows, were present in company with the gambel and brewer sparrows. Cactus woodpeckers, were easily obtained, but the Gila's were nearly as wild as the flickers. Back to camp at 10 o'clock with more than 10 birds. This is the best bird locality we have yet struck. This was our big day at the skinning table. Hoy put up 36 rats and mice, Sam 16 birds and I came up to 9.

Oct. 26, 1930. As we went to bed last night there was a thunder storm of to the southeastward. A car today reported rain at Miller's Landing. The sky was overcast this morning but a high wind from the northward soon blew the clouds away. Hunting was poor but several good birds were obtained. The wind made it easier to sneak up on the flickers. Sparrow flocks held closely to the thickest shrubs. The most noticeable fact about birds here is that when they do occur they come in flocks.—mixed flocks—such a one as once when I had the choice of a shot at a sparrow hawk, a cactus wren and a mead's thrasher with sparrows and gnat catchers all around. The thrasher was selected and the shot brought three flickers within range.

One flicker being wounded his calling held the other two nearby until one was obtained and the third left a handful of feathers floating down the wind. A gray flycatcher was taken on the way back to camp. Two desert sparrows were selected from the flocks of gambel and brewer sparrows. Two jackrabbits were collected here. Another good day at the skinning table with 25 mammals and twenty birds. The wind held up during the forepart of the night but died down towards morning. The traps were all set in the rocks on the hillside above camp.

Oct. 29, 1930 The wind came up with the sun this morning and is blowing a light gale now. Nothing in the traps. Hovey packing specimens - the drying cases being so full last night that we had to lay our day's skins on the table for the night. Hunting this morning proved profitable in spite of the wind or because of it. Two blue jays, two cactus wrens and a flicker were obtained from one cluster of birds. Two other flickers were stalked and secured. Probably the continuous movement of the plants and shrubs and trees makes the movement of the hunter less noticeable to the birds.

At camp yesterday morning a ground dove was shot, and this morning a white-winged dove was obtained from the breakfast table. Another gray flycatcher was secured. And two desert sparrows were selected from the sparrow flocks. We have just 135 skins to put up to make the thousand we are aiming at for the trip—and one week to go!

Oct. 28, 1930 Hunted northward from camp again and had nothing of much importance when we decided to start back for camp. A cactus wren and a desert sparrow. There were large flocks of brewer and gambel sparrows present in the brush. One jay was followed but not secured, and a bob-cat was shot at and missed. I headed westward after getting another desert sparrow and picked up a couple of clay colored sparrows. A wound Gila woodpecker proved to be an excellent decoy along the wash between the sand and the rocky hill slope westward. Three jays and another Gila were decoyed and taken. A scott oriole was killed from a Yucca in the wash eastward of the road. Cleaned up all the skinning tonight for an early start tomorrow (54 to go).

Oct 29, 1930 Got started at 7:45 a.m. At the point where Huey shot his deer—~~5~~ miles NW of Chapala—we stopped and hunted through a copse of mesquite in the draw west of the road. No deer sign were observed. A kingbird, an ash throated flycatcher, sparrow hawk, and a vesper sparrow and two clay colored sparrows made up the catch. Two desert sparrows were taken back at the road. As we drove down the wash toward the granite boulder hill—13 miles NW of Chapala—a redshafted flicker was shot. A little farther we jumped two deer, but could not get a good shot at them. Huey cut awfully close to one at about 600 yds. Two shrikes and a cactus woodpecker were killed in the near vicinity of our old camp near the granite hill. As we approached the dry flat 3 miles farther along the road a flock of horned larks were flushed. A prairie falcon interfered with our hunt. Sam wounded him and Huey got him. One lark was taken from the dry flat.

Another cactus woodpecker was secured at Jaraquay. Then at San Agustin 6 horned larks, an Audubon warbler and a San Pedro Martin Junco were taken at the water. Came 13 miles down the road to Santa Catarina landing and camped for the night at an old adobe house.

Oct. 30, 1930. In a high wind—at least a light gale—we skinned specimens until nearly noon. Packed and left for Santa Catarina Landing at 12:30. Down the canyon almost as far as Santa Catarina is the best growth of giant cactus we have seen on the trip. Cactus wrens were more abundant here than they have been elsewhere—several were taken. Desert sparrows were also plentiful. One clay-colored sparrow was secured along the road about a mile or so from camp. The place where we stopped—seven miles up the canyon north-by-east of Santa Catarina is called Romana by the natives. The canyon is cut down into the granite, on the south-east side the lava capping rock persists in places. At one place the point of contact was

observed. Only about two inches of the granite had been noticeably altered by the heat of the lava. When the metamorphic rocks were reached a few miles above Santa Catarina we noticed a decided difference in the abundance of the cacti growth. Below Santa Catarina the road passes thru a long series of volcanic hills where the growth is very sparse and different again. In the valley near the coast the Pataya prevails and birds were very thick. Several Scott Orioles, cactus wrens, mocking birds, flickers, Gilas, and migrant sparrows were observed.

The road was terrible all the way from Romona to the coast and "passable but unsafe" in the lower valley bottom. We stopped at the old oil well—how many thousands of dollars were sunk in this prospect hole? Starting in cretaceous beds where did they expect to strike the black gold? The Mexican here says the well is 2000 ft. deep. Tonight we lack but five skins for our 1000. The trap lines produced only that number.

Oct. 31, 1936: Santa Catarina Landing. OS-348

Our guide to the ammonite beds was late showing up, and when he arrived he was too drunk to find ammonites. This is a wonderful waterhole for birds. There must have been a thousand or two thousand birds watering here this morning. What a haven for a bird bander? Gambel sparrows, brewer sparrows (most abundant), horned larks, brewer black bird, lark buntings, large billed sparrows, bell sparrows, shrike, forbush sparrows. They were in large flocks, small flocks and medium sized ones and lone birds. We collected horned larks, bell sparrows and the forbush sparrow, and the large bill ^{also the shrike.} Left about 7:45. Hunted along the road through the pataya fruit and collected one cactus wren, a cactus woodpecker and two towhees, and two kinglets. This cactus grove was full of birds both last evening and this morning. A duck hawk was observed here and identified by Huey last evening. The pataya fruit seems to be the center of attraction here. About 6 miles up the road the cactus and the birds become sparse. A few thrashers were seen but not until we neared Santa Catarina did

the cactus wrens appear. There on each side of the village we obtained two wrens and a red-shafted Flicker.

All through the cardone canyon of Romona this association continued. Cactus wrens being our main objective along here we only stopped where we had a good opportunity to get them. It was surprising how soon the birds dwindled away as we emerged from the sparser growth of cardones. In the sparse cirios and cactus 3 m. W. of San Augustine a stop was made and a Gila Woodpecker was secured while a cactus wren escaped.

For the last three miles no bird was observed except a shrike.

At the San Augustine well we camped and set to work at the skinning.

Huey and I worked until 2:00 a.m. The ham was well boiled on a slow mesquite fire by then, and it came in very handy for lunches. The dutch oven was used for the last time this evening. Our food was very well selected and nearly everything lasted through about right.

Nov. 1, 1930San Agustine, 05389 = 8:30 a.m.

We left here and started for home at 8:30. A sharp-skinned hawk made a dive for some horned larks on the water, missed and perched in a nearby mesquite. He was immature and easily bagged. A white-winged dove was also taken before leaving here. Along the route we tried for every shrike, cactus woodpecker, cactus wren and thrasher that we saw, ~~without~~ without success until San Fernando was reached. There two cactus wrens and a white winged dove were taken.

The towhees steadily became more abundant as we traveled northward, as did also the thrashers.

We have our thousand skins and last night I ran my number up to two hundred. A very poor showing but somewhat excusable for one who had been nearly eight years out of practice at the skinning table. I made myself a little useful around camp to compensate for my slow skinning.

At Aguaiti Hill we took a cactus woodpecker and two thrashers, but were unable to obtain any flickers or cactus wrens, though several were seen.

In the canyon eight miles or so east of El Rosario we flushed our first flock of quail for the day. Nine were obtained for the mess pot, with much following up, and a couple of ground slews. Another and much larger flock was flushed just above the mouth of the canyon. We failed to get a single bird from the flock before they flew to the steep brushy canyon wall.

A little farther on some thrashers and cactus wrens delayed us again. One of each was secured. As we approached Santa Maria near San Quintin in the dark Poorwills appeared at intervals along the road. Finally by riding on the front mud guard one was bagged.

A snake was picked up along the road 6 miles S. of Socorro.

Nov. 2, 1936, Santa Maria, near
San Quintin — 05483 — 8:30 a.m.

This morning we went quail hunting up the canyon opposite the eucalyptus grove. The road was too badly washed out to permit driving up the road there. After hunting all morning we had about three dozen birds. I shot two sage sparrows which appear to differ greatly from those obtained at Santa Catarina landing.

We lunched near Hamilton's. About twenty miles back a native had just killed and mutilated a huge rattlesnake. There seem to be plenty of the large *Rubra*'s between Hamilton's and El Rosario. Unfortunately we did not meet up with any.

At a canyon filled with a sedge and cane marsh we flushed another flock of quail but only secured a few birds from the first flock and fewer from the last. They took again to the hill-side rosebush thickets — and the last flock to the marsh. A towhee was secured here.

We drove on into the night making our last camp in the little canyon just over the divide north of San Vicente with the speedometer reading 055.75.

Tomorrow we expect to reach San Diego and find out what has happened in the civilized world, at the Museum, and in our homes during these forty days of isolation. It will be more than pleasant to be back in my little home with my baby girl to play with and care for. I have often wondered just how she was getting along, alone with her young mother in an almost strange city.

Nov. 3, 1930. We got a seven o'clock start and traveled without interruption to Ensenada where we had a good lunch the first since our outgoing journey not of our own camp cooking.

At one o'clock we started the

last lap of our thousand mile journey. Not very far out of Ensenada, about thirty miles, the radiator sprung a leak where the fan axel had jammed into it. We stuffed some rags into the hole, disconnected the fan belt, and hurried on towards the border. We were not delayed fifteen minutes by the customs authorities at the line, but a fence wire staple in one of the tires gave us our first change of wheels for the entire trip. The change was quickly made and we hurried on.

Bewhiskered Sam was first left at his home—father, sister, mother came to the car to greet the returned hunter. Then on to Louisiana street, to a dark and silent house. A sudden apprehension of trouble filled my soul. The little four-year-old neighbor girl rushed up to tell me that my wife had left for Idaho. A disappointment that was only more disappointing as certain sordid, unbelievable details were learned.

~~~~~ FINIS ~~~~~







